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PATTERN OF USE OF ELECTRO-CONVULSIVE THERAPY IN CLINICAL PRACTICE OF PSYCHIATRISTS

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# ABSTRACT OBJECTIVE



OBJECTIVE: To determine the patterns of use of Electro-convulsive

therapy (ECT) in clinical practiceof Psychiatrists in Pakistan.

# STUDY DESIGN

Survey Research Design

# PLACE OF DURATION OF STUDY

Study was conducted at Department of Psychiatry Abbasi Shaheed Hospital, Karachi Medical & Dental College from 01-07- 2012 to31-10-2012.

# SUBJECTS AND METHOD

136 psychiatrists participated in the study. An online survey was carried out using a14item questionnaire,prepared at department of Psychiatry Karachi Medical & Dental College.The Questionnaire covered different aspects of use of ECT like its indications, methods of administration, complications, contraindications, efficacy, frequency of use and pre ECT counseling. This Questionnaire was sent by e-mails to psychiatrists practicing in different parts of the country. Psychiatrists of all ages and both genders, practicing for at least two years, were involved in the survey.

# RESULTS

Almost 60 % of the psychiatrists responded and sent back their responses by e-mail. The results of survey indicated that ECT is used frequently by Psychiatrists in their clinical Practice and most of them are aware of proper indications, methodology, expected complications and importance of pre ECTcounseling.

# CONCLUSION

Electro-convulsive treatment is still a popular therapeutic approach and most of the psychiatrists use ECT, following recommended guidelines, ethical values and safety protocol for patients requiringETC.

# KEYWORDS

Electro-convulsive Therapy, Clinical Practices, Psychiatrists, Pattern

# INTRODUCTION

Although electroconvulsive therapy (ECT) is an effective, and widely practiced therapeutic tool in the field of psychiatry, it has also been one of the debatable and poorly understood procedures as well'. Since it was introduced in 1938 by Carletti and Bini',it isused asaneffective therapeutic toolbypsychiatrists in their clinical practice. It is reported that, every year, about one million patients are administered ECT all over the world'. ECT is considered to be a widely available treatment option for psychiatric disorders and is frequently used by clinicians, globally'. Despite the availability of recommended American Psychiatric Association 2001 &Royal college of Psychiatrists 2005 guidelines for use of ECT, large variations in practice of ECT is reported worldwide'. It seems that opinion of psychiatrists also differs on important issues related to Electroconvulsive therapy like its method of administration,indications, complications and efficacy in different clinical diagnoses'. Different studies were conducted internationally, aimed to know the patterns of use of ECT by psychiatrists in their practice. Questionnaire based national surveys were conducted in Japan' and in UK' for the same purpose. A similar survey was carried out on patterns of clinical practicesofECTin Denmark'in 1999.

Few studies are also conducted related to Electroconvulsive therapy practices in local perspectives. Use of ECT at a university hospital in Karachi demonstrate its efficacy in developing country like Pakistan and also mentions the practices by psychiatrists of thisarea in administering ECT".

Uniformity in patterns of use of ECT by professionals, in the light of recommended guidelines, is important to get the required results in terms of efficacy and safety. Uniform approach can be agreed upon by knowing the existing practices of ECT application by the clinicians. Keeping this context in mind, the objective ofour study was to determine the pattern of use of ECT by the practicing psychiatrists in thecountry.

# SUBJECTS AND METHODS

**Participants**

A questionnaire was mailed to 224 Psychiatrists throughout the

country. Sampling was done through emails as mentioned in the directory of Pakistan Psychiatric Society.Inclusioncriteria related that psychiatrists belonged to both genders and were those who were qualified (having postgraduate qualification in psychiatry) and were practicing as psychiatrist at their respective places. Exclusion criteria was defined as psychiatrists who refused to participate in study or were not qualified in psychiatry were excluded from study. Those who were qualified but were not practicing psychiatry were also excluded fromthe study.

### Instruments

A 14 item questionnaire was prepared by the principal investigator and five other practicing Psychiatrists from the departments of psychiatry of different teaching institutionsof the city.Tostandardize and validate this questionnaire, it was sent to different faculty members of the teaching hospitals of the city and the opinions/ responses obtained from them were discussed and consequently certain modifications were made in a few questions and related response options.The demographic variables likeage,gender, city of residence, working place and clinical experience of the participants were also recorded by using a Performa designed for this purpose. The questionnaire consisted of 14 questions and the participants were required to choose oneout offiveresponses of each question. It measured the various issues that were pertinent to use of ECT and covered different aspects of its use like its indications, methods of administration,complications, contraindications, efficacy, frequency of use and pre ECT counseling. To facilitate the responders, the questionnaire wassent on line (by e-mail) to psychiatrists all over the country.

### Procedure

The study protocol was approved by the Ethical Review Committee (ERC) of Karachi Medical & Dental College. Informed consent was taken from Psychiatristsbefore the study.Their personal information (name, residence and place of work) was not recorded to maintain anonymity andconfidentiality.The data was analyzed using the SPSS statistical package, Version 17. Descriptive statistics were employed to determine the demographic andclinical variables.

**RESULTS**

224 psychiatrists were sentthe questionnaire.Out of 224only n= 136 (60.7%) responses were obtained bye mail and were included in the study.

Majority of the psychiatrists were male (86%). 68.4 % of the psychiatristswere aged less than 50 years while 31.6% were aged 50 or more than 50 years. majority of them were practicing psychiatry for more than 15 years i e 76.5 % (35.3 % practicing psychiatry for 15 to 20 years and 41.2 practicing for more than 20years), see table 1 for details.

69.1 % psychiatrists responded that they frequently use ECT in their practice. 77.90/ogave morethan 5 ECTsin therapeutic sessions. 78.6% of the ECTs were reported to be be given for mood disorders(65.4 % for depression and 13.2 % for mania). The most common side effect was reported as memory impairment (47.8%) andconfusion (30.1%) as reported by psychiatrists.psychiatristsreported skeletal problems

(41.9 %) and intracranial pathology (37.5%) as most common contraindicationsof ECT (see table 2 fordetails).

64.7 % psychiatristsreported the practice of ECT in operation theater under general anesthesia. 85.3 % reported that they always take informed consent. in physical examination before ECT, 40.4 % psychiatrists reported to conduct fundoscopy. 49.3 % conducted investigations for general anesthesia before giving ECT (see table 3 for details). Majority of psychiatrists reported ECT as potential treatment option giving considerable treatment out comes (see figurel &2).

**Table I**

Characteristics Of Psychiatrists (N= I 36)

|  |  |  |
| --- | --- | --- |
| **N** | | |
| **Gender** |  |  |
| **Male** | 117 | 86.0 |
| **Female** | 19 | 14.0 |
| **Age (years)** |  |  |
| <50 | 93 | 68.4 |
| > 50 | 43 | 31.6 |
| **Years of Psychiatric Practices** |  |  |
| <5 | 7 | 05.1 |
| 5- 10 | 9 | 06.6 |
| IO- 15 | 16 | 11.8 |
| 15-20 | 48 | 35.3 |
| >20 | 56 | 41.2 |

**Table 2**

Indications, Complications and Contraindications in use of ECT

|  |  |  |
| --- | --- | --- |
|  | **N** | -,,. |
| **How orten you use ECT in clinical Practices?** |  |  |
| **Rarely** | 42 | 30.9 |
| **Frequently** | 94 | 69.1 |
| **Frequency of ECT performed in Therapeutic session** |  |  |
| <5 | 30 | 22.1 |
| >5 | 106 | 77.9 |
| **Common Indications to use of ECT** |  |  |
| **Depression** | 89 | 65.4 |
| **Mania** | 18 | 13.2 |
| **Post•Partum psychosis** | 08 | 05.9 |
| **Schizophrenia** | 16 | 11.8 |
| **Other Indications** | 05 | 03.7 |
| **Common Side effects** |  |  |
| **Back ache** | 16 | 11.8 |
| **Confusion** | 41 | 30.1 |
| **Fracture/Dislocation** | 06 | 04.4 |

#### Table 3

Ethical Practices of ECT

|  |  |  |
| --- | --- | --- |
|  | **N** | % |
| Procedures used for giving ECT |  |  |
| Direct un-modificd | 07 | 05.1 |
| In Operation Theatre with General Anesthesia | 88 | 64.7 |
| In ward with Thiopcntonc | 41 | 30.1 |
| Informed Consent taken before ECT |  |  |
| Mostly | 20 | 14.7 |
| Always | 116 | 85.3 |
| Physical Examination before giving ECT |  |  |
| None | 15 | II |
| Fundoscopy | *55* | 40.4 |
| General examination | 34 | 25 |
| Nervous system | 14 | 10.3 |
| Skeletal exam | 18 | 13.2 |
| Investigations advised before giving ECT |  |  |
| None | II | 08.1 |
| ECG | 07 | 05.1 |
| MR.I Brain | 44 | 32.4 |
| X-ray Skull | 07 | 05.1 |
| Investigations for General Anesthesia | 67 | 49.3 |
| Modification of Dose before ECT |  |  |
| Yes | 130 | 95.6 |
| No | 06 | 04.4 |
| Drugs Modified |  |  |
| Anticonvulsants | 61 | 44.9 |
| Antidepressants | 06 | 04.4 |
| Benzodiazcpincs | 28 | 20.6 |
| Lithium | 41 | 30.1 |

#### Figure I

Effectiveness of ECT as treatment oplion as reoprted by psychiatrists

## DISCUSSION

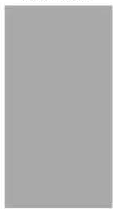
ECT has been used as a treatment option by many practicing psychiatrists in Pakistan. The response rate of the mailed questionnaires in our study was 60% which is far better than study conducted in India" where only 28.8% responded, as compared with 90% responders to similar study in developed country".This may be due to the use of a better option of email in methodology which is easy to communicate with little or noadditional cost involved. With the advancement in psychopharmacology from 1950s onwards the use of ECT has been declined in many countries of the world. In our study it was encouraging that majority showed positive attitude towards its use in their practice especially in younger aged psychiatrists. This may be due to better awareness, safe and improved facilities available now at healthcare facilities. A favorable response was shownin asimilar studyconducted in India".

Our study finding in gender difference is 1: 6 female to male. This is quitedifferent from studyconducted in Indian institutes where it was found to be1 to 1.56".

The pattern of use of ECT in clinical practice was different in different parts of Pakistan. Similar reports are documented in studies conductedin differentcountries" including Saudi Arabia" .

Our results showed that about 213rd patients required more than 5 therapeutic sessions for ECT to be effective. In almost all studies conducted in different countries showed similar pattern"·"·"·.

Mood disorder including Depression was found to be the most common indication and was followed by mania, schizophrenia, and other condition including postpartum psychosis. This finding was in accordance with recommendation given in American Psychiatric Association 2001 guidelines. This aspect of result was also found in other studies" that ECT is used as first line treatment of major depression Similarly ECT has been used for treatment of schizophrenia in other countries as reported by Zerves et al in their study".In the study by G Gazdag et al,schizophrenia was found to be the most common indication for ECT in Hungary during 200221• ECT in treatment resistant depression andSchizophrenia isstill used asan effective treatment by psychiatrists in different countries as it was found in our study. Above 90%participants in ourstudy agreed thatit is an effective method for treatment for psychiatric disorders. This finding suggests the confidence of practicing psychiatrists in this therapeutic approach.



How much you agree that ECT has got limited use in practice these days?

64.70%

Do not Agree

Agree

#### Figure 2

Psychiatrists responses on ECT's therapeutic response

#### Therapeutic Response

42.6

36.8

2.9

17.6

As in our study ECT is administered mostly involuntarily but with guardian's consent. In Asia, written informed consent is mainly obtained directly or counter signed by family members".The modified ECT was preferred method of choice with prior physical examination done and investigations like ECG MRI-Brain and X-ray chest were performed before administration as recommended by guidelines. Further majority of Psychiatrist modified the already prescribed drugs to patient prior to ECT as indicated in update of royal college of Psychiatrist.

Side effects profile in our study differed from study conducted in 14 Asian countrieswhere unmodified ECT was used in 50% of patients".

Unsatisfactory Satisfactory Very Good Excellent



Finding in our study showsthat in more than 90% cases anesthesia is used.In the study conducted in Jap n lshimoto Yet al", 37% showed



adverse effects of memory impairment and confusion which were predominantly seen in our study.

## LIMITATIONS OF STUDY

Limitations of this studyis lesser number of participants asopinion of alarger sample size would reflect the current practices and trends of majority. Hospital based studies at different centers with higher number of participants should be carried out to get a wider opinion in this regard.

## CONCLUSION

ECT is an effective treatment in Psychiatric practice and most of the psychiatrists are following recommended guidelines for use of ECT, keeping in mind the ethical values and safety protocol for patients requiring ECT. A guideline to administer ECT in local perspective is however needs to be developed so that a uniform approach can be adopted in clinicalpractice by psychiatrists.

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**"Pattern of use of ECT in clinical practice of Psychiatrists**

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